



2812

PATENT
0459-0649P

IN THE U.S. PATENT AND TRADEMARK OFFICE

Applicant: BOGGILD, Peter Conf.: 1235
Appl. No.: 09/938,153 Group: UNASSIGNED
Filed: August 24, 2001 Examiner: UNASSIGNED
For: FABRICATION AND APPLICATION OF NANO-
MANIPULATORS WITH FOCUSED BEAM INDUCED
GROWTH

2.7-
10/11/02
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SEP 18 2002
TC 1700

INFORMATION DISCLOSURE STATEMENT
(SUBMISSION AFTER FILING OF AN APPLICATION
BUT BEFORE FINAL REJECTION OR NOTICE OF ALLOWANCE
OR CONCURRENTLY WITH A RULE 53(d) CPA APPLICATION
OR WITH A RULE 1.114 RCE APPLICATION)

Assistant Commissioner for Patents
Washington, DC 20231

February 19, 2002

Sir:

Pursuant to 37 C.F.R. §§ 1.97 and 1.98, applicant(s) hereby
submit(s) an Information Disclosure Statement for consideration
by the Examiner.

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FEB 20 2002I. LIST OF PATENTS, PUBLICATIONS OR OTHER INFORMATION

The patents, publications, or other information submitted
for consideration by the Office are listed on the PTO-1449(s),
attached hereto.

II. COPIES (check at least one box)

- a. ☒ Submitted herewith is a legible copy of (i) each
U.S. and foreign patent; (ii) each publication or
that portion which caused it to be listed; and
(iii) all other information or that portion which
caused it to be listed.
- b. ☐ Some or all of the documents listed on the PTO-
1449 are not enclosed because they were cited in
the International Search Report and copies should
already be in the PTO file. If copies are needed,
please contact the undersigned.

III. CONCISE EXPLANATION OF THE RELEVANCE
(check at least one box)

a. ☒ **DOCUMENTS IN THE ENGLISH LANGUAGE**

The attached patents, publications, or other information in the English language do not require a statement of relevancy.

b. ☐ **DOCUMENTS NOT IN THE ENGLISH LANGUAGE**

A concise explanation of the relevance of all patents, publications, or other information listed that is not in the English language is as follows:

c. ☐ **ENGLISH LANGUAGE SEARCH REPORT**

An English language version of the search report or action that indicates the degree of relevance found by the foreign office is attached, thereby satisfying the requirement for a concise explanation. See MPEP 609(A)(3).

d. ☒ **OTHER**

The following additional information is provided for the Examiner's consideration.

"High Resolution Electron Beam Induced Deposition" to Koops et al. and "Focused Ion-Beam Technology and Applications" to Melngalis are discussed on page 5 of the present application, and "The Formation of a Connection between Carbon Nanotubes in an Electron Beam" to Banhard is discussed on page 20.

FEES

IV. ☒ THIS IDS IS BEING FILED UNDER 37 C.F.R. § 1.97(b):
(check one box)

- a. ☐ within three months of the filing date of a national application (37 C.F.R. § 1.97(b)(1)). No fee or statement is required. (This section is not to be used with RCE's and CPA's).
- b. ☐ within three months of the date of entry of the national stage as set forth in § 1.491 in an international application (37 C.F.R. § 1.97(b)(2)). No fee or statement is required.
- c. ☐ concurrently with the filing of a Continued Prosecution Application under 37 C.F.R. § 1.53(d) or concurrently with the filing of a Request for Continued Examination under § 1.114 (37 C.F.R. § 1.97(b)(4)). No fee or statement is required.
- d. ☒ before the mailing date of a first Action on the merits (37 C.F.R. § 1.97(b)(3)). No fee or statement is required.
In the event that a first Office Action on the merits has been issued, please consider this IDS under 37 C.F.R. § 1.97(c) and see the statement under 37 C.F.R. § 1.97(e) below, or, if no statement has been made, charge our deposit account in the amount of \$180.00 as required by 37 C.F.R. § 1.17(p).

V. ☐ THIS IDS IS BEING FILED UNDER 37 C.F.R. § 1.97(c):
(check one box)

before the mailing date of a Final Office Action under 37 C.F.R. § 1.113 (See 37 C.F.R. § 1.97(c)(1)) or before the mailing date of a Notice of Allowance under 37 C.F.R. § 1.311 (See 37 C.F.R. § 1.97(c)(2)).

- a. ☐ No statement; therefore, a fee in the amount of \$180.00 as required by 37 C.F.R. § 1.17(p).
or
- b. ☐ See the statement below. No fee is required.

VI. STATEMENT UNDER 37 C.F.R. § 1.97(e) (check only one box)

The undersigned hereby states that

- a. ☐ each item of information contained in the IDS was first cited in any communication from a foreign Patent Office in a counterpart foreign application not more than three months prior to the filing of this IDS; or
- b. ☐ no item of information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of IDS was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of the IDS.
- c. ☐ Some of the items of information were cited in a communication from a foreign Patent Office. As to this information, the undersigned states that each item of information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application not more than three months prior to the filing of this IDS. As to the remaining information, the undersigned hereby states that no item of this remaining information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application and, to the best of my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this statement.

VII. PAYMENT OF FEES (check one box)

- ☐ A check in the amount of \$180.00 as required by 37 C.F.R. § 1.17(p) is enclosed for the above-identified fee.
- ☐ Please charge Deposit Account No. 02-2448 in the amount required by 37 C.F.R. § 1.17(p) for the above-indicated fee. A triplicate copy of this paper is attached.
- ☒ No fee is required.

If the Examiner has any questions concerning this IDS, he/she is requested to contact the undersigned. If it is determined that this IDS has been filed under the wrong rule, the PTO is requested to consider this IDS under the proper rule and charge the appropriate fee to Deposit Account No. 02-2448.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under § 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

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KM/as
0459-0649P

Enclosures: ☒ PTO-1449
☒ Documents
☐ Foreign Search Report
☐ Fee
☐ Other:

Form PTO-1449				ATTY DOCKET NO. 0459-0649P		APPLICATION NO. 09/938,153	
INFORMATION DISCLOSURE CITATION IN AN APPLICATION (Use several sheets if necessary)				APPLICANT BOGGILD, Peter			
				FILING DATE August 24, 2001		GROUP UNASSIGNED	
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE	
	01P55025,346	1991-06-18	TANG et al.				
FOREIGN PATENT DOCUMENTS							
	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION YES NO	
OTHER DOCUMENTS (Include Name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.)							
	BANHART, "The Formation of a Connection between Carbon Nanotubes in an Electron Beam," Nano Letters, Vol. 1, No. 6, June 13, 2001, pp. 329-332.						
	BAUGHMAN et al., "Carbon Nanotube Actuators," Science, Vol. 284, May 21, 1999, pp. 1340-1344.						
	GUREVICH et al., "Scanning gate spectroscopy on nanoclusters," Applied Physics Letters, Vol. 76, No. 3, January 17, 2000, pp. 384-386.						
	HONG et al., "Multiple Ink Nanolithography: Toward a Multiple-Pen Nano-Plotter," Science, Vol. 286, October 15, 1999, pp. 523-525.						
	KOOPS et al., "High-resolution electron-beam induced deposition," J. Vac. Sci. Technol. B, Vol. 6, No. 1, Jan/Feb 1988, pp. 477-481.						
	MELNGAILIS, "Focused ion beam technology and applications," J. Vac. Sci. Technol. B, Vol. 5, No. 2, Mar/Apr 1987, pp. 468-495.						
	OOI et al., "3D Nano Wire-Frame for Handling and Observing a Single DNA Fiber," IEEE, 2000, pp. 580-583.						
	PORATH et al., "Direct measurement of electrical transport through DNA molecules," Nature, Vol. 403, February 10, 2000, pp. 635-638.						
EXAMINER				DATE CONSIDERED			
EXAMINER: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							